REPORT ON LOANS TO PRIVATE ENTITIES FOR WATER POLLUTION ABATEMENT AND CONTROL FACILITIES AND PUBLIC WATER SUPPLY SYSTEMS

2016 ACT 103 §38

Submitted to the

House Committees on Corrections and Institutions
House Committee on Fish, Wildlife and Water Resources
House Committee on Commerce and Economic Development
Senate Committees on Institutions
Senate Committee on Natural Resources and Energy

Department of Environmental Conservation

Agency of Natural Resources

December 30, 2016

Executive Summary

This report is submitted pursuant to 2016 Act 103, Section 38, which requires the Secretary of the Agency of Natural Resources (ANR) to report on whether and how to provide loans under 24 V.S.A. chapter 120 to private entities for water pollution abatement and control facilities, and for public water supply systems.

During the 2016 legislative session, the Legislature substantially reorganized the loan and grant provisions for the clean water and drinking water programs administered by the Department of Environmental Conservation (DEC), which is within the Vermont Agency of Natural Resources. In the course of its deliberations, the Legislature took testimony on the Vermont Clean Water State Revolving Fund (CWSRF) program, and the possibility of expanding loans from the CWSRF from municipalities to include private entities.

Under the 2014 Water Resources Reform and Development Act (WRRDA), the federal government expanded the scope of entities that may be eligible for loan funding under the Clean Water State Revolving Fund (CWSRF) program. For the Vermont CWSRF to make loans to private entities, the Vermont Legislature would need to amend state statute to take advantage of the 2014 federal law.

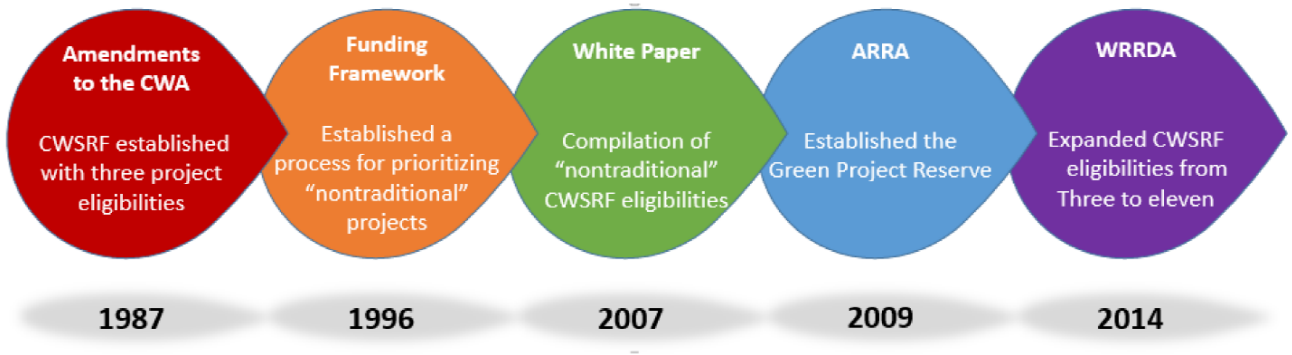
DEC recommends that the Legislature amend the Vermont CWSRF to authorize loans to private entities, as described in more detail below. Vermont can leverage the CWSRF to expand access to loans that will help both municipalities and private entities comply with the statewide Clean Water Act of 2014, as well as comply with Total Maximum Daily Limits (TMDLs) for waters across the State of Vermont.

Introduction

DEC administers loans to municipalities for water pollution abatement through the Clean Water State Revolving Fund (CWSRF) program. The CWSRF is authorized by and receives funding from the U.S. Congress when a state match is provided. In 2016, the Vermont legislature appropriated $1.3 million to the CWSRF to match $6.4 million in federal funds. At the end of FY16, the balance in the CWSRF available for lending was $61.3 million.

DEC has traditionally lent money from the CWSRF to municipalities for wastewater treatment facility (WWTFs) projects, combined sewer overflows (CSOs), and sewer related refurbishment and upgrade projects. Over the past two decades, the federal government has expanded the CWSRF program from these traditional areas into nontraditional areas. Although Vermont's program has not often departed from traditional wastewater facility projects, federal law now allows CWSRF monies to be used for eleven different project types, including watershed and stormwater projects.[1]

[1] 2014 WRRDA, Section 5003 (codified at 33 U.S.C. § 1383(c)), enumerates eleven eligible project types from the Clean Water State Revolving Loan Fund. Projects are authorized to public and private entities as follows:



Clean Water State Revolving Fund (CWSRF) Eligibility Timeline[2]

As Vermont begins to grapple with the costs of complying with the Vermont Clean Water Act of 2014, as well as with multiple Total Maximum Daily Limits (TMDLs) in effect across the State, the viability of using the CWSRF to meet clean water requirements has become more attractive.

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(1) to any municipality, intermunicipal, interstate, or State agency for construction of publicly owned treatment works (as defined in section 212 of the Clean Water Act) [codified at 33 U.S.C. § 1292];
(2) for the implementation of a management program established under section 319 of the Clean Water Act [codified at 33 U.S.C. § 1329];
(3) for the development and implementation of a conservation and management plan under section 320 of the Clean Water Act [codified at 33 U.S.C. § 1330];
(4) for the construction, repair, or replacement of decentralized wastewater treatment systems that treat municipal wastewater or domestic sewage;
(5) for measures to manage, reduce, treat, or recapture stormwater or subsurface drainage water;
(6) to any municipality, intermunicipal, interstate, or State agency for measures to reduce the demand for publicly owned treatment works capacity through water conservation, efficiency, or reuse;
(7) for the development and implementation of watershed projects meeting the criteria set forth in section 122 [codified at 33 U.S.C. § 1274];
(8) to any municipality, intermunicipal, interstate, or State agency for measures to reduce the energy consumption needs for publicly owned treatment works;
(9) for reusing or recycling wastewater, stormwater, or subsurface drainage water;
(10) for measures to increase the security of publicly owned treatment works
(11) to any qualified nonprofit entity, as determined by the Administrator, to provide assistance to owners and operators of small and medium sized publicly owned treatment works
    (A) to plan, develop, and obtain financing for eligible projects under this subsection, including planning, design, and associated preconstruction activities; and
    (B) to assist such treatment works in achieving compliance with this Act.

[2] Graphic from "Overview of Clean Water State Revolving Fund" Eligibilities (EPA May 2016). https://www.epa.gov/sites/production/files/2016-07/documents/overview_of_cwsrf_eligibilities_may_2016.pdf

Along with the federal government, Vermont's understanding of how the built landscape affects water quality has grown over time. We now understand that stormwater runoff contributes phosphorus and sediment pollution that is washed into streams when it rains or as snow melts. Stormwater runoff occurs when precipitation or snowmelt runs off of parking lots, roofs of buildings and homes, roads, driveways and other developed land. In addition, we now have a better appreciation of the interconnection between public and private stormwater mitigation efforts.

Of the eleven project types eligible for CWSRF loans, the 2014 WRRDA authorized private entities to take on loans for five project types, 33 U.S.C. § 1383(c)(4), (5), (7), (9), (11), as described in more detail below:

<u>Nonprofits only:</u>

- Projects providing technical assistance to small and medium publicly owned treatment works for planning, design, and pre-construction activities. 33 U.S.C. § 1383(c)(11).

<u>Private and public entities generally:</u>

(a) Wastewater projects:
    (1) Decentralized wastewater treatment system projects that treat municipal wastewater or domestic sewage (33 U.S.C. § 1383(c)(4)); and
    (2) Projects to reuse or recycle wastewater. 33 U.S.C. § 1383(c)(9).

(b) Stormwater projects:
    (1) Projects that manage, reduce, treat, or recapture stormwater (33 U.S.C. § 1383(c)(5)); and
    (2) Projects to reuse or recycle stormwater. 33 U.S.C. § 1383(c)(9).

(c) Subsurface drainage projects:
    (1) Projects that manage, reduce, treat, or recapture subsurface drainage water (33 U.S.C. § 1383(c)(5)); and
    (2) Projects to reuse or recycle subsurface drainage water. 33 U.S.C. § 1383(c)(9).

(d) Pilot projects 33 U.S.C. § 1383(c)(7); *see also* 33 U.S.C. § 1274. (i.e. - innovative projects to try out new technologies or approaches to managing pollutants; EPA is currently working on guidance):
    (1) Watershed management of wet weather discharge projects;
    (2) Stormwater BMP projects;
    (3) Watershed partnership projects;
    (4) Integrated water resource planning projects;
    (5) Municipality-wide stormwater management planning projects; and
    (6) Increased resilience of treatment works projects.

Reasons for expanding CWSRF loans to private entities

DEC supports expanding CWSRF loans to private entities. By expanding CWSRF loan eligibility to private entities, Vermont DEC and municipalities could target the most cost-effective pollution reduction strategies; leverage additional funds by charging an incremental 1% to 2% on loans to private entities; reduce administrative burden on municipalities; and promote social justice by lending to entities, such as private homeowners' associations, that are otherwise unable to obtain low-interest loans for needed upgrades to onsite septic systems.

First, CWSRF loans to private entities can encourage cost-effective water pollution strategies. Stormwater does not follow parcel boundaries. Physical conditions such as soil type, vegetation type, existing developments and other physical constraints become important in siting decisions for stormwater controls. Stormwater projects on private property may protect water quality better and be more cost-effective than municipal projects addressing the same pollution.

For example, communities may choose to address surface water pollution using "green stormwater infrastructure," an emerging, innovative strategy that uses natural and semi-natural landscape elements to treat stormwater. Green stormwater infrastructure uses infiltration, evapotranspiration, storage and reuse - mimicking natural hydrologic processes -- to either prevent runoff from occurring or treat it as close to the source as possible. By mimicking natural infrastructure, these techniques can help keep stormwater out of combined sewer overflow systems, making them a cost-effective strategy for reducing the impacts associated with CSOs. These green infrastructure techniques can also help to reduce the size of more expensive "gray infrastructure" stormwater control measures (such as storage or treatment facilities).

Second, the State could generate additional funds in the CWSRF by charging an incremental 1% to 2% on loans to private entities. If the State charges higher interest rates to private entities, it could increase the volume of repayment (Tier 2) money available to the program for relending. This would help maintain CWSRF fund fiscal sustainability and integrity through consistent use and includes income from Tier 2 funds. Leveraging of CWSRF funds could also increase the overall Clean Water funds available in Vermont.

Third, the State could reduce the administrative burden on municipalities that otherwise would be asked sponsor loans to private entities. Under current state law, municipalities can sponsor CWSRF loans to private entities. These loans can be made only upon voter authorization, and the private entity must enter into a repayment agreement with the municipality. These loans are called "pass-through" or "municipally sponsored" loans. The process is burdensome for all parties.

Attachment 1 lists private projects that obtained municipally sponsored loans from the Vermont CWSRF. Projects have supported public health issues and modest growth in designated growth centers They include the connection of failed indirect discharge and on-site wastewater systems, repair of failed and substandard wastewater collection systems, and repair of direct discharge and on-site wastewater systems. DEC manages these projects through the municipal pollution control projects

priority list, and there is no separate allocation specifically for municipally sponsored projects. By allowing the CWSRF to lend money directly to private entities, the Legislature could reduce the burden on municipalities to administer "pass through" loans.

Fourth, the State could promote social justice by offering low-interest loans to private entities such as homeowners' associations or mobile home parks that need to upgrade sanitary facilities.

Other states already make loans to private entities. The State of Maine has made loans to the Maine State Housing Authority for the repair of failed on-site septic systems since 1995, to farmers for the construction of manure storage facilities since 2001, and to loggers for the purchase of "best management practices" (BMP) equipment to protect streams while logging since 2007; see Maine's Intended Use Plan. The State of West Virginia has made loans through the West Virginia Housing Development Fund and other nonprofit associations to private entities to address failed septic systems since 2000; see West Virginia's Intended Use Plan.

Responses to the Questions Set Forth in Act 103, Section 38

This section responds to the specific questions posed by the Legislature in Section 38 in 2016 Act 103.

(1) "*The report shall include … an assessment of the total funds available from the state for grants and loans to municipal and private entities to improve water quality*."

Clean Water State Revolving Fund (CWSRF)

Loans: As of July 1, 2016, the unawarded balance of the Clean Water State Revolving Fund (CWSRF) was $61.3 million. It is anticipated the State will continue to receive federal capitalization grants on the order of $6.4 million per year and will match those grants with state funds of $1.3 million per year. In addition, loan repayments will add to the corpus of the fund, which over 10 years is projected to grow to $106.8 million.

Grants: Based on the past 10-years' State capital appropriations, it is anticipated that approximately $2.1 million will be appropriated annually to support the Vermont Municipal Pollution Control Grant Program, resulting in $21.0 million over 10 years.

Total Loans and Grants: Together, loans and grants are expected to total $204.8 million over the next 10 years.

Table 1: Funds Available for Clean Water Projects (figures are in $M)

Source	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	**10-YR**
CWSRF	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	**64.0**
State Match	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	**13.0**
Loans Repaid	9.0	9.4	9.7	9.9	10.3	10.7	11.2	11.7	12.2	12.7	**106.8**
Grants	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	**21.0**
Total	**18.8**	**19.2**	**19.5**	**19.7**	**20.1**	**20.5**	**21.0**	**21.5**	**22.0**	**22.5**	**204.8**

Drinking Water State Revolving Fund (DWSRF)

As of July 1, 2016, the unawarded balance of the Drinking Water State Revolving Fund (DWSRF) was $24.1 million. It is anticipated the State will continue to receive federal capitalization grants on the order of $6.6 million per year for projects and match those grants with state funds of $1.8 million per year. Additionally, loan repayments over the 10 years are projected to total $62.5 million. Taken together, these sources will create lending capacity of $146.5 million over 10 years.

Table 2: Funds Available for Drinking Water Projects (figures are in $M)

Source	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	**10-YR**
DWSRF	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	**66.0**
State Match	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	**18.0**
Tier 2	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	**62.5**
Total	**12.4**	**12.9**	**13.4**	**13.9**	**14.4**	**14.9**	**15.4**	**15.9**	**16.4**	**16.9**	**146.5**

DEC's on-site loan progra

DEC's on-site loan program is statutorily allocated $275,000 in permit fee revenue each year for loans to private individuals who are unable to obtain market-rate loans to repair failed wells and septic systems. Only owners of single family residences are eligible for these loans. This fund has been in operation for three years and loan volumes are still ramping up.

Table 3: On-Site Septic Loan Program

Calendar Year	Number of Loans	Total Value of Loans
2014 Issued Loans	6	$102,062
2015 Issued Loans	8	$148,435
2016 Issued Loans	6	$98,555
2016 Pending Loans	3	$51,227

U.S. Department of Agriculture

Additional funds on the order of $11 million annually from the United States Department of Agriculture Rural Development's Water and Environmental Programs are available for municipal drinking water and clean water projects.

(2) "The report shall include … Ten-Year Estimate of Costs to Municipalities to Comply with State and federal Water Quality and Water Supply Requirements"

DEC has prepared detailed 20-year cost projections for clean water for the Treasurer's Clean Water Funding Report, which will be submitted to the Legislature in January 2017. The table below summarizes the clean water projections, where Tier 1 refers to wastewater costs directly related to Act 64 compliance and Tier 2 is an estimate of other wastewater needs.

Table 4: Clean Water Costs (figures in $M)

Tier	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	**10-YR**
1	11.82	16.10	34.95	42.65	54.80	47.97	39.02	26.75	11.28	11.28	**296.62**
2	27.84	25.02	11.81	7.73	8.78	5.56	6.41	14.88	35.20	35.20	**178.43**
Total	**39.66**	**41.12**	**46.76**	**50.38**	**63.58**	**53.53**	**45.43**	**41.63**	**46.48**	**46.48**	**475.05**

(3) The drinking water infrastructure costs are estimated to be $27.8 million annually, totaling $278 million over 10 years. Since the inception of the DWSRF through the close of FY16, $175 million and $24 million have been awarded to municipally and privately owned public water systems, respectively. Providing DWSRF loans to private entities has not historically impeded the ability of municipalities to proceed with projects that are ready for funding. *"The report shall include … Ten-Year Municipal Demand on Loan and Grants for Compliance with State and federal water quality and water supply requirements"*

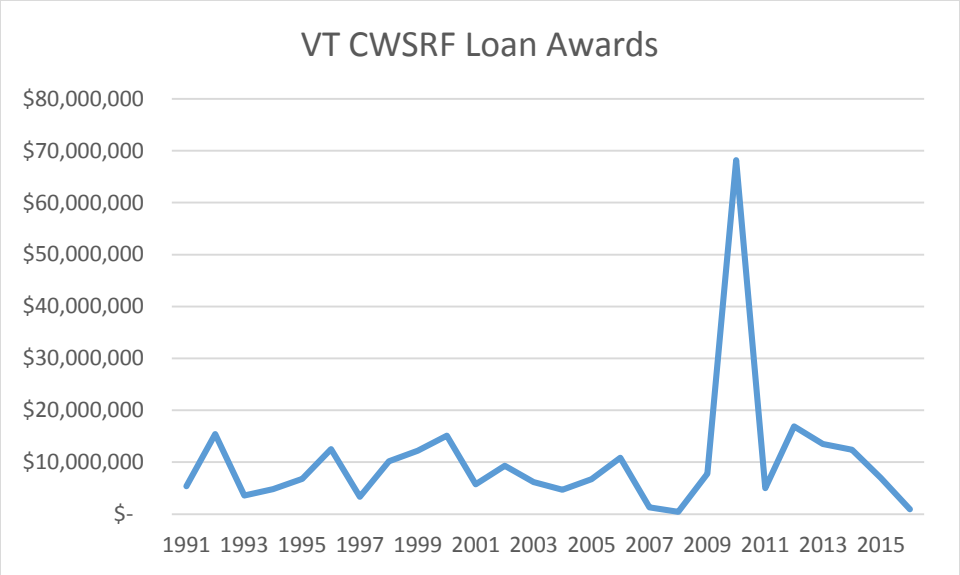
Though municipalities can independently sell municipal bonds to self-finance clean water and drinking water projects, historically municipalities have pursued state financing due to the lower cost of such financing. The clean water costs described in Table 4 will be met in some degree by the award of the funds described in Table 1. The projected cost of clean water and drinking water infrastructure over the next 10 years exceeds the overall long-term financing available at this time.

It is unlikely, however, that municipalities will attempt to undertake all of the projects identified in Table 1. The demand for loans by municipalities depends, in part, on the ability of communities and rate payers to absorb the costs of the loan repayments. As rate payers reach their financial saturation point, voter approval for projects becomes less likely. This may result in increased demand for state grants and reluctance to take on loans.

Likewise, legal challenges to the Lake Champlain Total Maximum Daily Limit (TMDL) for phosphorus may impact municipalities' willingness to take on loans. Legal challenges create uncertainty regarding phosphorus targets and the infrastructure necessary to meet those targets.

Most recently, municipal use of the CWSRF has been low due to an overall sluggish economy, low interest rates in the bond market, loan saturation following Tropical Storm Irene, slow development of the Lake Champlain TMDL, and a historically low rate offered through competing lenders. The lag in loans issued will mean a lag in the long term CWSRF fund sustainability as some loans are paid off and few new loan repayments are taking their places. Loans to private entities would help to assure that the loan funds are more fully utilized and the funds are revolving as intended.

The following chart demonstrates the volatility in CWSRF loan demand by municipalities over the last 25 years:



The unusually high awards total in FY2010 include one-time federal stimulus funding provided under the authority of the American Recovery and Reinvestment Act (ARRA) of 2009. The ARRA loans were incentivized with a 50% loan principal forgiveness provision.

(4) *"The report shall include … [a] recommendation of whether to authorize loans under 24 V.S.A. chapter 120 to private entities for water pollution abatement and control facilities or public water supply systems."*

Regarding the Drinking Water State Revolving Fund (DWSRF) Program, DEC recommends that the state continue providing DWSRF loans to qualifying privately owned public water systems, therefore, no change is recommended to this program. Prior to existence of the DWSRF Loan Program in 1997, privately-owned public water systems did not have access to this low cost financing option, making it difficult for those systems to comply with the Safe Drinking Water Act.

For the Clean Water State Revolving Fund (CWSRF) Program, DEC recommends amending 24 V.S.A. chapter 120 to expand eligibility to private entities that are undertaking wastewater and stormwater systems consistent with the provisions in WRRDA. More generally, DEC recommends aligning CWSRF loans to the strategic goals set forth in the Vermont Clean Water Act of 2014 and Vermont's Lake Champlain TMDL Phase I Plan.[3] Under federal law, the CWSRF can support a broad array of eligible water quality improvement projects, including:

[3] The Lake Champlain Final Phase I Implementation Plan is available on DEC's website at: http://dec.vermont.gov/watershed/cwi/restoring

- Wastewater Treatment Facilities (WWTFs) and Combined Sewer Overflows (CSOs)
- Stormwater Management and Treatment
- Agricultural Best Management Practices
- Decentralized Waste Management Treatment
- Stormwater & groundwater improvements at Hazardous Waste Contaminated Sites
- Groundwater and Surface Water Protection and Restoration
- Planning /Assessment

By expanding eligibility to private entities for all project types that are aligned with Vermont's Clean Water goals, the State of Vermont can target the most cost-effective projects and remove some of the burden currently on municipalities.

(i) "the basis for the recommendation;"

Lending CWSRF monies to private entities will (1) encourage cost-effective water pollution strategies, (2) generate additional funds for the CWSRF by recouping higher interest on loans to private entities, (3) reduce the administrative burden on municipalities that otherwise are asked to sponsor loans to private entities, and (4) promote social justice by offering low-interest loans to private entities such as homeowners' associations or mobile home parks that need to upgrade sanitary facilities and are otherwise unable to obtain loans.

(ii) "how loans to municipal projects would retain priority over private entities in eligibility;"

All CWSRF projects must apply annually for inclusion in the Pollution Control Projects Priority List. The projects are prioritized through a points system as defined in the Chapter 2 Environmental Protection Rule, which is currently under revision pursuant to 2016 Act 103. A potential points criterion or scaling factor could be type of ownership, giving greater weight to municipal projects. Only ready-to-proceed, top-ranking construction projects are funded from the CWSRF.

(iii) "whether loans to private entities should be limited to certain types of water pollution abatement and control facilities or public water supply systems projects, including:"

(I) "whether loans for correcting sewage problems should only be authorized to private residences or development with failed systems, as that term is defined in 10 V.S.A. § 1972;"

Secretary recommends broadening funding to eligible private systems with imminent failure, water quality concerns, or public health concerns as determined by the Secretary rather than limiting funding to only failures as defined in 10 V.S.A. *§ 1972.*

(II) "[whether] loans to private entities for stormwater management should be limited to situations when stormwater runoff contributes to combined sewer overflow issues in a municipality and the State or the municipality lacks regulatory authority to require the private entity to implement stormwater controls;"

DEC does not recommend limiting project types eligible for CWSRF loans to combined sewer overflows (CSOs) that require mitigation on private property.

DEC recommends broadening private loans to all eligible projects authorized under the federal CWSRF, using DEC's priority points system as set forth in the Chapter 2 Environmental Protection Rule, and currently under revision pursuant to 2016 Act 103, to determine which projects shall obtain loan awards. DEC would recommend giving priority to municipal loan applications.

(iv) "which financial institution or institutions should administer the loans; and"

For efficiency, DEC recommends expanding its existing relationships to administer private loans from the CWSRF. The Vermont Municipal Bond Bank and the Peoples United Bank provide financing and collection service for municipal loans from the DWSRF and CWSRF. VEDA provides loans to private entities through the DWSRF and a parallel process can be developed for CWSRF if this eligibility is authorized. Currently, Opportunities Credit Union underwrites and administers loans to individuals through the On-Site Loan Program.

(v) "recommendations on loan eligibility requirements, conditions of loan agreements, and other provisions necessary to administer loans to private entities."

Since this query is not within DEC's area of expertise, DEC recommends consulting with VEDA for advice on loan eligibility requirements and conditions of loans agreements to private entities.

Attachment 1:

Existing Municipally Sponsored CWSRF Loans to Private Entities

Final Completion Year	Pass-Through Loans Benefiting Private Entities	Type of Private Entity	Sponsoring Municipality	Project Description	Number of Lots/ERUs	Total Project Loan Value
1999	Breezy Acres MHP Sewer Extension	MHP	Colchester	Connect to Municipal WWCS	329 units	$1,580,960
2002	Belwood Stormwater Improvements	Residential Subdivision	Colchester	Stormwater and Groundwater Drainage Improvements	61	$992,832
2006	Decentralized Community WW	Community	Warren	Construction of Decentralized Community Wastewater Disposal Systems	290	$787,523
2006	Decentralized Loan Program Year 1	Individual	Colchester	Implementation of "Strategic Water Quality Plan"	See year 3.	$150,000
2007	Decentralized Loan Program Year 2	Individual	Colchester	Implementation of "Strategic Water Quality Plan"	See year 3.	$80,796
2012	Meadow Ridge Community Association	HOA	Williston	Abandon Failed Community Wastewater System, Connect to Municipal WWCS	60	$478,353
2013	Decentralized Loan Program Year 3	Individual	Colchester	Implementation of "Strategic Water Quality Plan"	23 units total for all three phases	$101,068
2015	Windemere MHP, Housing Foundation Inc	MHP	Colchester	Municipal Water and Sewer Refurbishment	83	$500,000
ongoing	Decentralized Loan Program	Business and Municipal	Waitsfield	Planning, Design, and Construction of Individual Onsite System Refurbishments	8	$286,671

Attachment 2 – Further Reading

"Clean Water State Revolving Fund Federal Fiscal Year 2016 Final Intended Use Plan" by John N. True, Maine DEP, August 2016

EPA Guidance Memo on 2014 WRRDA, Andres D Sawyers, USEPA, January 6, 2015 (on NY-DEC website)

"Financing Green Infrastructure: A Best Practices Guide for the Clean Water State Revolving Fund" by USEPA CWSRF, 2015

"FY2016 Intended Use Plan" by West Virginia Clean Water State Revolving Fund, June 25, 2015

"Overview of Clean Water State Revolving Fund Eligibilities" by US EPA, May 2016

"Mobile Home Park Environmental Justice Grant Final Report" by Vermont DEC, July 1, 2002

"Warren, Vermont: A Different Approach for Managing Wastewater in Rural Villages" by Stone Environmental and Forcier Aldrich & Associates, March 11, 2005

Webinar "Innovative Financing for Green Infrastructure" by Jennifer Cotting, Deron Muerhing, and Lori Beary, November 4, 2014